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| 09/935,661 | 08/24/2001 | Kenji Oshima | 2001_1135A | 1004 |

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EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 08/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,661

Applicant(s)

OSHIMA, KENJI

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

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DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicant's amendment filed 6/6/03.

In light of the new grounds of rejection as set forth below, namely, the rejection of claim 7 by Baker et al. (U.S. 5,698,616), the following rejection is non-final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection is adequately set forth in paragraph 1(b) of the office action mailed 3/6/03, Paper No. 8, and is incorporated here by reference.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker et al. (U.S. 5,698,616) taken in view of the evidence in Ueda et al. (U.S. 4,051,052).

Baker et al. disclose ink for electrostatic ink jet printer wherein the ink comprises solvent possessing electrical resistivity of greater than $10^{10} \Omega\text{cm}$ such as aliphatic hydrocarbon, polymer including repeating units of alkyl (meth)acrylate such as octadecyl acrylate which is soluble in the solvent, colorant insoluble in the solvent, and metal salt of fatty acid wherein the fatty acid includes naphthenic acid. There is also disclosed a method wherein the solvent and colorant are added to polymer and metal salt (col.5, lines 13-34 and 56, col.9, lines 48-50 and 62-63, col. 10, lines 1-7 and 22-29, col.14, lines 1-4 and 14-19, and col.15, lines 22-35). The aliphatic hydrocarbons include those known under the tradename Isopar G and Isopar H which are well known, as found in Ueda et al. (col.7, lines 38-48), to possess boiling point of 160-177 °C and 174-190 °C, respectively.

Using the specification as a dictionary in order to define ζ potential of the colorant, it is noted that page 14, lines 27-29 of the present specification discloses that it is the metal soap and the polymer that imparts ζ potential to the colorant. Thus, given that Baker et al. disclose ink comprising metal soap and polymer identical to those presently claimed, it is clear that the colorant of Baker et al. will inherently possess ζ potential as presently claimed.

In light of the above, it is clear that Baker et al. anticipate the present claims.

Response to Arguments regarding 35 USC 112 rejection of record

6. Applicant's arguments filed 6/6/03 have been fully considered but they are not persuasive.

Previously, examiner argued that claims 1-7 were indefinite given that claims 1 and 7 each recited that R2 is one of an alkyl group having 4 to 22 carbon atoms and a "derivative" thereof and that it was not clear what types of compound were encompassed by the phrase "derivative".

Applicant responds by saying that the term is commonly used in patents and therefore does not render the scope of the claims indefinite. Applicant cited two patents which recite the phrase "derivative" in the claims.

However, "it is immaterial whether similar claims have been allowed in another application", *In re Giolito and Hofmann*, 188 USPQ 645. The claims allowed in other applications having no direct bearing on the present claims. Further, in U.S. 4,681,896 and U.S. 4,415,554 cited by applicant, while each of these patents do recite "derivative" in the claims, it is noted that the phrase "derivative" is defined in the specification of each reference. In the present specification, there is no direction or guidance provided with respect to what is meant by "derivative" or what types of compounds are encompassed by this phrase.

Thus, examiner's position remains that the scope of the above claims is confusing because it is not clear what is meant by "derivative" and what types of compounds are encompassed by this phrase.

Response to Arguments regarding 35 USC 102 rejection

7. Applicant's arguments regarding Nicholls et al. (U.S. 5,453,121), Shibata et al. (U.S. 6,290,764), and Kato (U.S. 6,402,315) have been considered but they are moot in view of the discontinuation of these references against the present claims.

8. Applicant's arguments filed 6/6/03 have been fully considered but, with the exception of arguments relating to Nicholls et al., Shibata et al., and Kato, they are not persuasive.

Specifically, applicant argues that Baker et al. is not a relevant reference against the present claims given that Baker et al. disclose ink comprising co(polymeric) core that is insoluble in carrier liquid, i.e. aliphatic hydrocarbon solvent, which is in direct contrast to the present claims which require polymer soluble in the aliphatic hydrocarbon solvent.

However, while it is true that Baker et al. disclose co(polymeric) core that is insoluble in aliphatic hydrocarbon solvent, it is noted that the ink of Baker et al. contains organosol which comprises the co(polymeric) core as well as graft stabilizer which is bonded or grafted to the core. It is the graft stabilizer which includes repeating units of alkyl (meth)acrylate. Further, Baker et al. disclose that the graft stabilizer is soluble or marginally insoluble in the aliphatic hydrocarbon solvent. Baker et al. also disclose that the graft stabilizer has absolute difference in Hildebrand solubility parameter between 1.5-3 MPa^{1/2} relative to the solvent and that this value can be manipulated by controlling the type of polymer and solvent utilized which in turn controls the solubility of the graft stabilizer.

Thus, while the core portion of the organosol is insoluble, the graft stabilizer portion of the organosol is soluble in the aliphatic hydrocarbon solvent. Therefore, it is clear that polymer,

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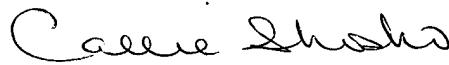
i.e. organosol, of Baker et al. is at least partially soluble in the aliphatic hydrocarbon solvent due to the presence of the graft stabilizer. Further, Baker et al. provides guidance on how to control the solubility of the graft stabilizer by controlling the Hildebrand solubility parameter.

In light of the above, and given that the present claims are open to all degrees of solubility, i.e. complete solubility or partial solubility, and further given that the organosol of Baker et al. is partially soluble in the aliphatic hydrocarbon solvent due to the presence of the graft stabilizer, it is the examiner's position that Baker et al. meets the requirements of the present claims and thus, remains a relevant reference against the present claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie E. Shosho
Primary Examiner
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